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<130> 004974.00851

<150> US 60/367,512

<151> 2002-03-27

<150> US 60/406,936

<151> 2002-08-30

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<212> DNA

<213> Homo sapiens

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<212> PRT

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acagtagata	cttctgatgg	attctcggca	ttaactcctg	tttcaaaaaa	gtgtgaacag	3660
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<210> 4

<211> 1138

<212> PRT

<213> Mus musculus

<400> 3

Met	Lys	Lys	Phe	Ser	Arg	Met	Pro	Lys	Ser	Glu	Gly	Ser	Gly	Gly	Gly
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Ala	Ala	Ala	Gly	Gly	Ala	Ala	Gly	Gly	Gly	Leu	Gly	Gly	Gly	Phe	Ala
			20					25					30		
Ser	Ser	Ser	Met	Gly	Val	Arg	Val	Phe	Ala	Gly	Arg	Tyr	Gln	Val	
			35				40				45				
Thr	Leu	Glu	Glu	Ser	Leu	Ala	Glu	Gly	Gly	Phe	Ser	Thr	Val	Phe	Leu
	50					55					60				
Val	Arg	Thr	His	Ser	Gly	Ile	Arg	Cys	Ala	Leu	Lys	Arg	Met	Tyr	Val
65					70					75					80
Asn	Asn	Thr	Pro	Asp	Leu	Asn	Ile	Cys	Lys	Arg	Glu	Ile	Thr	Ile	Met
				85					90					95	
Lys	Glu	Leu	Ser	Gly	His	Lys	Asn	Ile	Val	Gly	Tyr	Leu	Asp	Cys	Ala
			100					105					110		
Val	Asn	Ser	Ile	Ser	Asp	Asn	Val	Trp	Glu	Val	Leu	Ile	Leu	Met	Glu
			115				120					125			
Tyr	Cys	Arg	Ala	Gly	Gln	Val	Val	Asn	Gln	Met	Asn	Lys	Lys	Leu	Gln
	130					135					140				
Thr	Gly	Phe	Thr	Glu	Ser	Glu	Val	Leu	Gln	Ile	Phe	Cys	Asp	Thr	Cys
145					150					155					160
Glu	Ala	Val	Ala	Arg	Leu	His	Gln	Cys	Lys	Thr	Pro	Ile	Ile	His	Arg
				165					170					175	
Asp	Leu	Lys	Val	Glu	Asn	Ile	Leu	Leu	Asn	Asp	Ala	Gly	Asn	Tyr	Val
			180				185						190		
Leu	Cys	Asp	Phe	Gly	Ser	Ala	Thr	Asn	Lys	Phe	Leu	Asn	Pro	Gln	Lys
		195					200					205			
Asp	Gly	Val	Asn	Val	Val	Glu	Glu	Glu	Ile	Lys	Lys	Tyr	Thr	Thr	Leu
	210					215					220				
Ser	Tyr	Arg	Ala	Pro	Glu	Met	Ile	Asn	Leu	Tyr	Gly	Gly	Lys	Pro	Ile
225					230					235					240
Thr	Thr	Lys	Ala	Asp	Ile	Trp	Ala	Leu	Gly	Cys	Leu	Leu	Tyr	Lys	Leu
				245					250					255	
Cys	Phe	Phe	Thr	Leu	Pro	Phe	Gly	Glu	Ser	Gln	Val	Ala	Ile	Cys	Asp
			260					265					270		
Gly	Ser	Phe	Thr	Ile	Pro	Asp	Asn	Ser	Arg	Tyr	Ser	His	Asn	Val	His
			275				280						285		

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Cys Leu Ile Arg Phe Met Leu Glu Pro Asp Pro Glu Cys Arg Pro Asp
 290 295 300
 Ile Phe Gln Val Ser Tyr Phe Ala Phe Lys Phe Ala Lys Lys Asp Cys
 305 310 315 320
 Pro Val Ser Asn Ile Asn Asn Ser Phe Leu Pro Ser Thr Leu Pro Glu
 325 330 335
 Pro Met Thr Ala Thr Glu Ala Ala Ala Arg Lys Ser Gln Met Lys Ala
 340 345 350
 Arg Ile Thr Asp Thr Ile Gly Pro Thr Glu Thr Ser Ile Ala Pro Arg
 355 360 365
 Gln Arg Pro Lys Ala Asn Ser Thr Ala Ala Thr Ser Ser Val Leu Thr
 370 375 380
 Ile Gln Ser Ser Ala Thr Pro Val Lys Val Pro Ala Pro Gly Glu Phe
 385 390 395 400
 Ser Asn His Lys Pro Lys Gly Ala Leu Arg Pro Gly Asn Gly Ser Glu
 405 410 415
 Val Leu Met Val Gln Gly Pro Pro Gln Gln Pro Pro Gln Gln His Arg
 420 425 430
 Val Leu Gln Gln Leu Gln Gln Gly Asp Trp Arg Leu Gln Gln Leu His
 435 440 445
 Leu His Arg His Pro His His His His Gln Gln Gln Gln Gln Gln
 450 455 460
 Gln Gln Gln Gln Gln Gln Gln Leu Gln Gln Gln Gln Gln Gln
 465 470 475 480
 Gln Leu Leu Gln Asn Ala Tyr Leu Gln Gln Tyr Gln His Ala Met His
 485 490 495
 Gln Gln His Ile Leu Gln Gln Gln Phe Leu Met His Ser Val Tyr Gln
 500 505 510
 Pro Gln Pro Pro Ser Gln Tyr Pro Ala Met Met Gln Gln Tyr Gln
 515 520 525
 Gln Ala Phe Leu Gln Gln Gln Met Leu Ala Arg His Gln Gln Pro Ala
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 Gln Gln Val Ser Pro Glu Tyr Leu Thr Ser Pro Gln Glu Phe Ser Pro
 545 550 555 560
 Ala Leu Val Ser Tyr Ala Ser Ser Leu Pro Ala Gln Val Gly Thr Ile
 565 570 575
 Val Asp Ser Ser Tyr Gly Ala Asn Arg Ser Val Ala Glu Lys Glu Ala
 580 585 590
 Val Ala Asn Phe Thr Asn Gln Lys Thr Ile Ser His Pro Pro Asp Met
 595 600 605
 Ser Gly Trp Asn Pro Phe Gly Glu Asp Asn Phe Ser Lys Leu Thr Glu
 610 615 620
 Glu Glu Leu Leu Asp Arg Glu Phe Asp Leu Leu Arg Ser Asn Arg Leu
 625 630 635 640
 Gly Ala Ser Thr Pro Ser Asp Lys Thr Val Asp Leu Pro Pro Ala Pro
 645 650 655
 His Ser Arg Pro Pro Glu Glu Pro Phe Ala Ser Val Pro Phe Ile Ser
 660 665 670
 His Ser Gly Ser Pro Glu Lys Lys Thr Thr Glu His Ser Pro Asn Gln
 675 680 685
 Lys Ser Ile Thr Ala Asn Leu Thr Lys Asn Gly Gly Ser Ser Pro Leu
 690 695 700
 Cys Lys Asp Gln Arg Ala Gly Lys Lys Thr Ser Glu Asn Pro Val Ile
 705 710 715 720
 Arg Gly Gln Val Gln Lys Gly His Asp Asp Ser Glu Ser Asp Phe Glu
 725 730 735
 Ser Asp Pro Pro Ser Pro Lys Ser Ser Glu Glu Glu Gln Glu Asp Glu
 740 745 750

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Asp Ala Gln Gly Glu His Gly Asp Phe Asn Asp Asp Asp Thr Glu Pro
 755 760 765
 Glu Asn Leu Gly His Arg Pro Leu Leu Met Asp Ser Glu Asp Glu Glu
 770 775 780
 Glu Asp Asp Lys His Ser Ser Asp Ser Glu Cys Glu Gln Ala Lys Thr
 785 790 795 800
 Lys Arg Gly Asp Thr Ser Ser Leu Arg Arg Asp Lys Pro Gly Val Ala
 805 810 815
 Pro Asp Thr Ala Leu Leu Thr Pro Ala Arg Ser Pro Ala Asp Ala Leu
 820 825 830
 Thr Pro Ser Gln Glu Phe Asp Val Phe Gly Ala Val Pro Phe Phe Ala
 835 840 845
 Ala Pro Ala Pro Gln Ser Leu Gln His Arg Gly Asp Gly Lys Asn Leu
 850 855 860
 Ser Gln His Ala Phe Pro Glu Gln Glu Asp Phe Asp Val Phe Thr Lys
 865 870 875 880
 Ala Pro Phe Asn Lys Lys Val Ser Val Gln Asp Trp Pro Ala Val Gly
 885 890 895
 Pro Asp Ala Arg Pro Leu Pro Ala Arg Pro Arg Ser Val Asp Ile Phe
 900 905 910
 Gly Ser Thr Pro Phe Gln Pro Phe Ser Val Ser Ala Ser Lys Ser Glu
 915 920 925
 Ser Lys Glu Asp Val Phe Gly Leu Val Pro Phe Glu Glu Ile Thr Gly
 930 935 940
 Ser Gln Gln Gln Gln Lys Val Lys Gln Arg Ser Leu Gln Lys Leu Ser
 945 950 955 960
 Ser Arg Gln Arg Arg Thr Lys Gln Asp Val Ser Lys Ser Asn Gly Lys
 965 970 975
 Arg His His Gly Thr Pro Thr Ser Ala Lys Lys Thr Leu Lys Pro Pro
 980 985 990
 Tyr Arg Thr Pro Glu Arg Ala Arg Arg His Lys Lys Val Gly Arg Arg
 995 1000 1005
 Asp Ser Gln Ser Ser Asn Glu Phe Leu Thr Ile Ser Asp Ser Lys Glu
 1010 1015 1020
 Asn Ile Ser Val Ala Leu Thr Asp Gly Lys Asp Arg Ala Ser Val Leu
 1025 1030 1035 1040
 Pro Ser Asp Glu Ser Leu Leu Asp Pro Phe Gly Ala Lys Pro Phe His
 1045 1050 1055
 Pro Pro Asp Leu Trp His Gln Pro His Gln Gly Leu Ser Asp Ile Cys
 1060 1065 1070
 Val Asp His Thr Thr Ile Leu Pro Gly Arg Pro Arg Gln Asn Ser Val
 1075 1080 1085
 His Gly Ser Phe His Ser Ala Glu Thr Leu Arg Met Asp Asp Phe Gly
 1090 1095 1100
 Ala Val Pro Phe Thr Glu Leu Val Val Gln Ser Val Thr Pro Gln Gln
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 Ser Gln Pro Val Glu Leu Asp Pro Phe Gly Ala Ala Pro Phe Pro Ser
 1125 1130 1135
 Lys Gln

<210> 5

<211> 1311

<212> PRT

<213> Homo sapiens

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<400> 5

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			20					25					30		
Val	Glu	Leu	Gly	Glu	Leu	Arg	Leu	Arg	Val	Arg	Arg	Val	Leu	Ala	Glu
			35					40					45		
Gly	Gly	Phe	Ala	Phe	Val	Tyr	Glu	Ala	Gln	Asp	Val	Gly	Ser	Gly	Arg
			50					55				60			
Glu	Tyr	Ala	Leu	Lys	Arg	Leu	Leu	Ser	Asn	Glu	Glu	Glu	Lys	Asn	Arg
65					70				75						80
Ala	Ile	Ile	Gln	Glu	Val	Cys	Phe	Met	Lys	Lys	Leu	Ser	Gly	His	Pro
				85					90					95	
Asn	Ile	Val	Gln	Phe	Cys	Ser	Ala	Ala	Ser	Ile	Gly	Lys	Glu	Glu	Ser
			100					105					110		
Asp	Thr	Gly	Gln	Ala	Glu	Phe	Leu	Leu	Leu	Thr	Glu	Leu	Cys	Lys	Gly
			115					120				125			
Gln	Leu	Val	Glu	Phe	Leu	Lys	Lys	Met	Glu	Ser	Arg	Gly	Pro	Leu	Ser
			130				135					140			
Cys	Asp	Thr	Val	Leu	Lys	Ile	Phe	Tyr	Gln	Thr	Cys	Arg	Ala	Val	Gln
145					150				155						160
His	Met	His	Arg	Gln	Lys	Pro	Pro	Ile	Ile	His	Arg	Asp	Leu	Lys	Val
				165					170					175	
Glu	Asn	Leu	Leu	Leu	Ser	Asn	Gln	Gly	Thr	Ile	Lys	Leu	Cys	Asp	Phe
			180					185					190		
Gly	Ser	Ala	Thr	Thr	Ile	Ser	His	Tyr	Pro	Asp	Tyr	Ser	Trp	Ser	Ala
			195				200					205			
Gln	Arg	Arg	Ala	Leu	Val	Glu	Glu	Glu	Ile	Thr	Arg	Asn	Thr	Thr	Pro
			210				215				220				
Met	Tyr	Arg	Thr	Pro	Glu	Ile	Ile	Asp	Leu	Tyr	Ser	Asn	Phe	Pro	Ile
225					230				235						240
Gly	Glu	Lys	Gln	Asp	Ile	Trp	Ala	Leu	Gly	Cys	Ile	Leu	Tyr	Leu	Leu
				245					250					255	
Cys	Phe	Arg	Gln	His	Pro	Phe	Glu	Asp	Gly	Ala	Lys	Leu	Arg	Ile	Val
			260					265					270		
Asn	Gly	Lys	Tyr	Ser	Ile	Pro	Pro	His	Asp	Thr	Gln	Tyr	Thr	Val	Phe
			275				280					285			
His	Ser	Leu	Ile	Arg	Ala	Met	Leu	Gln	Val	Asn	Pro	Glu	Glu	Arg	Leu
			290			295					300				
Ser	Ile	Ala	Glu	Val	Val	His	Gln	Leu	Gln	Glu	Ile	Ala	Ala	Ala	Arg
305					310				315						320
Asn	Val	Asn	Pro	Lys	Ser	Pro	Ile	Thr	Glu	Leu	Leu	Glu	Gln	Asn	Gly
				325					330					335	
Gly	Tyr	Gly	Ser	Ala	Thr	Leu	Ser	Arg	Gly	Pro	Pro	Pro	Pro	Val	Gly
			340					345					350		
Pro	Ala	Gly	Ser	Gly	Tyr	Ser	Gly	Gly	Leu	Ala	Leu	Ala	Glu	Tyr	Asp
			355				360					365			
Gln	Pro	Tyr	Gly	Gly	Phe	Leu	Asp	Ile	Leu	Arg	Gly	Gly	Thr	Glu	Arg
			370				375					380			
Leu	Phe	Thr	Asn	Leu	Lys	Asp	Thr	Ser	Ser	Lys	Val	Ile	Gln	Ser	Val
385					390					395					400
Ala	Asn	Tyr	Ala	Lys	Gly	Asp	Leu	Asp	Ile	Ser	Tyr	Ile	Thr	Ser	Arg
				405					410					415	
Ile	Ala	Val	Met	Ser	Phe	Pro	Ala	Glu	Gly	Val	Glu	Ser	Ala	Leu	Lys
			420					425					430		
Asn	Asn	Ile	Glu	Asp	Val	Arg	Leu	Phe	Leu	Asp	Ser	Lys	His	Pro	Gly
			435				440					445			
His	Tyr	Ala	Val	Tyr	Asn	Leu	Ser	Pro	Arg	Thr	Tyr	Arg	Pro	Ser	Arg
			450			455					460				

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Phe	His	Asn	Arg	Val	Ser	Glu	Cys	Gly	Trp	Ala	Ala	Arg	Arg	Ala	Pro	465	470	475	480
His	Leu	His	Thr	Leu	Tyr	Asn	Ile	Cys	Arg	Asn	Met	His	Ala	Trp	Leu	485	490		495
Arg	Gln	Asp	His	Lys	Asn	Val	Cys	Val	Val	His	Cys	Met	Asp	Gly	Arg	500	505		510
Ala	Ala	Ser	Ala	Val	Ala	Val	Cys	Ser	Phe	Leu	Cys	Phe	Cys	Arg	Leu	515	520		525
Phe	Ser	Thr	Ala	Glu	Ala	Ala	Val	Tyr	Met	Phe	Ser	Met	Lys	Arg	Cys	530	535		540
Pro	Pro	Gly	Ile	Trp	Pro	Ser	His	Lys	Arg	Tyr	Ile	Glu	Tyr	Met	Cys	545	550		555
Asp	Met	Val	Ala	Glu	Glu	Pro	Ile	Thr	Pro	His	Ser	Lys	Pro	Ile	Leu	565	570		575
Val	Arg	Ala	Val	Val	Met	Thr	Pro	Val	Pro	Leu	Phe	Ser	Lys	Gln	Arg	580	585		590
Ser	Gly	Cys	Arg	Pro	Phe	Cys	Glu	Val	Tyr	Val	Gly	Asp	Glu	Arg	Val	595	600		605
Ala	Ser	Thr	Ser	Gln	Glu	Tyr	Asp	Lys	Met	Arg	Asp	Phe	Lys	Ile	Glu	610	615		620
Asp	Gly	Lys	Ala	Val	Ile	Pro	Leu	Gly	Val	Thr	Val	Gln	Gly	Asp	Val	625	630		635
Leu	Ile	Val	Ile	Tyr	His	Ala	Arg	Ser	Thr	Leu	Gly	Gly	Arg	Leu	Gln	645	650		655
Ala	Lys	Met	Ala	Ser	Met	Lys	Met	Phe	Gln	Ile	Gln	Phe	His	Thr	Gly	660	665		670
Phe	Val	Pro	Arg	Asn	Ala	Thr	Thr	Val	Lys	Phe	Ala	Lys	Tyr	Asp	Leu	675	680		685
Asp	Ala	Cys	Asp	Ile	Gln	Glu	Lys	Tyr	Pro	Asp	Phe	Gln	Val	Asn		690	695		700
Leu	Glu	Val	Glu	Val	Glu	Pro	Arg	Asp	Arg	Pro	Ser	Arg	Glu	Ala	Pro	705	710		715
Pro	Trp	Glu	Asn	Ser	Ser	Met	Arg	Gly	Leu	Asn	Pro	Lys	Ile	Leu	Phe	725	730		735
Ser	Ser	Arg	Glu	Glu	Gln	Gln	Asp	Ile	Leu	Ser	Lys	Phe	Gly	Lys	Pro	740	745		750
Glu	Leu	Pro	Arg	Gln	Pro	Gly	Ser	Thr	Ala	Gln	Tyr	Asp	Ala	Gly	Ala	755	760		765
Gly	Ser	Pro	Glu	Ala	Glu	Pro	Thr	Asp	Ser	Asp	Ser	Pro	Pro	Ser	Ser	770	775		780
Ser	Ala	Asp	Ala	Ser	Arg	Phe	Leu	His	Thr	Leu	Asp	Trp	Gln	Glu	Glu	785	790		795
Lys	Glu	Ala	Glu	Thr	Gly	Ala	Glu	Asn	Ala	Ser	Ser	Lys	Glu	Ser	Glu	805	810		815
Ser	Ala	Leu	Met	Glu	Asp	Arg	Asp	Glu	Ser	Glu	Val	Ser	Asp	Glu	Gly	820	825		830
Gly	Ser	Pro	Ile	Ser	Ser	Glu	Gly	Gln	Glu	Pro	Arg	Ala	Asp	Pro	Glu	835	840		845
Pro	Pro	Gly	Leu	Ala	Ala	Gly	Leu	Val	Gln	Gln	Asp	Leu	Val	Phe	Glu	850	855		860
Val	Glu	Thr	Pro	Ala	Val	Leu	Pro	Glu	Pro	Val	Pro	Gln	Glu	Asp	Gly	865	870		875
Val	Asp	Leu	Leu	Gly	Leu	His	Ser	Glu	Val	Gly	Ala	Gly	Pro	Ala	Val	885	890		895
Pro	Pro	Gln	Ala	Cys	Lys	Ala	Pro	Ser	Ser	Asn	Thr	Asp	Leu	Leu	Ser	900	905		910
Cys	Leu	Leu	Gly	Pro	Pro	Glu	Ala	Ala	Ser	Gln	Gly	Pro	Pro	Glu	Asp	915	920		925

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Leu Leu Ser Glu Asp Pro Leu Leu Leu Ala Ser Pro Ala Pro Pro Leu
 930          935          940
Ser Val Gln Ser Thr Pro Arg Gly Gly Pro Pro Ala Ala Ala Asp Pro
945          950          955          960
Phe Gly Pro Leu Leu Pro Ser Ser Gly Asn Asn Ser Gln Pro Cys Ser
          965          970          975
Asn Pro Asp Leu Phe Gly Glu Phe Leu Asn Ser Asp Ser Val Thr Val
          980          985          990
Pro Pro Ser Phe Pro Ser Ala His Ser Ala Pro Pro Pro Ser Cys Ser
          995          1000          1005
Ala Asp Phe Leu His Leu Gly Asp Leu Pro Gly Glu Pro Ser Lys Met
1010          1015          1020
Thr Ala Ser Ser Ser Asn Pro Asp Leu Leu Gly Gly Trp Ala Ala Trp
1025          1030          1035          1040
Thr Glu Thr Ala Ala Ser Ala Val Ala Pro Thr Pro Ala Thr Glu Gly
          1045          1050          1055
Pro Leu Phe Ser Pro Gly Gly Gln Pro Ala Pro Cys Gly Ser Gln Ala
          1060          1065          1070
Ser Trp Thr Lys Ser Gln Asn Pro Asp Pro Phe Ala Asp Leu Gly Asp
          1075          1080          1085
Leu Ser Ser Gly Leu Gln Gly Ser Pro Ala Gly Phe Pro Pro Gly Gly
          1090          1095          1100
Phe Ile Pro Lys Thr Ala Thr Thr Pro Lys Gly Ser Ser Ser Trp Gln
1105          1110          1115          1120
Thr Ser Arg Pro Pro Ala Gln Gly Ala Ser Trp Pro Pro Gln Ala Lys
          1125          1130          1135
Pro Pro Pro Lys Ala Cys Thr Gln Pro Arg Pro Asn Tyr Ala Ser Asn
          1140          1145          1150
Phe Ser Val Ile Gly Arg Glu Glu Arg Gly Val Arg Ala Pro Ser
          1155          1160          1165
Phe Ala Gln Lys Pro Lys Val Ser Glu Asn Asp Phe Glu Asp Leu Leu
          1170          1175          1180
Ser Asn Gln Gly Phe Ser Ser Arg Ser Asp Lys Lys Gly Pro Lys Thr
1185          1190          1195          1200
Ile Ala Glu Met Arg Lys Gln Asp Leu Ala Lys Asp Thr Asp Pro Leu
          1205          1210          1215
Lys Leu Lys Leu Leu Asp Trp Ile Glu Gly Lys Glu Arg Asn Ile Arg
          1220          1225          1230
Ala Leu Leu Ser Thr Leu His Thr Val Leu Trp Asp Gly Glu Ser Arg
          1235          1240          1245
Trp Thr Pro Val Gly Met Ala Asp Leu Val Ala Pro Glu Gln Val Lys
          1250          1255          1260
Lys His Tyr Arg Arg Ala Val Leu Ala Val His Pro Asp Lys Ala Ala
1265          1270          1275          1280
Gly Gln Pro Tyr Glu Gln His Ala Lys Met Ile Phe Met Glu Leu Asn
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<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> random oligonucleotide

<400> 6

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